

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.15**SOURCE INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** SIR-000013**Date Inspected:** 12-Jan-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**Quality Control Contact:** Liu Liu**Quality Control Present:** Yes No**Material transfer:** Yes No N/A**Sampled Items:** Yes No N/A**Stock Transfer:** Yes No N/A**OK to Cut:** Yes No N/A**Rebar Test Witness:** Yes No N/A**Delayed/Cancelled:** Yes No N/A**Other:** Welding Procedure Qualification Mechanical test and Film Review**Bridge No:** 34-0006**Component:** N/A**Bid Item:****Lot No:** B31-004-07 to B31-006-07**Summary of Items Observed:**

On this date the QA representative Joe Lanz performed a review of radiographic film and witness mechanical tests of procedure qualification test plates. Following is a list of test plates and details of the review.

Procedure qualification test plate ID HP2006120, Caltrans index lot number B41-003-07 performed by Zhenhua Port Machinery Company (ZPMC). The QA inspector observed Charpy V-notch tests in accordance with AWS D1.5-96 Section 5.18.5. The test machine calibration was verified. ZPMC personnel verified the specimen dimensions. The weld metal specimens were tested at -30 degrees Centigrade and the heat affected zone (HAZ) specimens were tested at 4 degrees C. The tests were performed and the results recorded. The QA observed All Weld Metal Tensile test in accordance with AWS D1.5-96 Section 5.18.4. Test Machine calibration was verified. ZPMC personnel verified specimen dimensions. The test was performed and results recorded. The QA inspector observed side bend tests in accordance with AWS D1.5-96 Section 5.18.3. ZPMC personnel performed tests and recorded results. The QA inspector observed 2 reduced section tensile coupon tests in accordance with AWS D1.5-96 Section 5.18.1. The test machine calibration was verified. ZPMC personnel verified specimen dimensions. The test was performed and results recorded. The testing appeared to comply with the contract documents. Caltrans witness lot number B31-004-07 was assigned for tracking purposes.

Procedure qualification test plate ID HP2006129, Caltrans index lot number B60-002-07 performed by Zhenhua Port Machinery Company (ZPMC). The test plate was radiographed by Jin Tong Jian Chen NDT Company LTD. of Shanghai China. The NDT Level II Inspector Mr. Huang Ming Hai performed the radiography and review of the radiographic film prior to submitting the NDT report and the radiographic film to the Quality Assurance Inspector for review. The film quality and weld quality were interpreted by Mr. Hai for compliance with AWS D1.5-2002 Section 6 Part B and Figure 6.1A and the results met the requirements of paragraph 6.26.2. Mr. Hai found the radiographs to be acceptable and the QA inspector concurred with the following exception. The QA inspector

SOURCE INSPECTION REPORT

(Continued Page 2 of 2)

observed that the number 45 IQIs appeared to be placed on the film side of the test plate during radiography. AWS D1.5-2002 paragraph 6.10.7.1 states "Hole-type IQIs shall be placed on the source side with hole-type IQI parallel to the weld joint and holes at the outer edge of the area being radio graphed." The film for the test plate appears to be interpretable. The testing did not appear to comply with the contract documents. Caltrans witness lot number B31-005-07 was assigned for tracking purposes.

Procedure qualification test plate ID HP2006131, Caltrans index lot number B41-004-07 performed by Zhenhua Port Machinery Company (ZPMC). The test plate was radiographed by Jin Tong Jian Chen NDT Company LTD. of Shanghai China. The NDT Level II Inspector Mr. Huang Ming Hai performed the radiography and review of the radiographic film prior to submitting the NDT report and the radiographic film to the Quality Assurance Inspector for review. The film quality and weld quality were interpreted by Mr. Hai for compliance with AWS D1.5-2002 Section 6 Part B and Figure 6.1A and the results met the requirements of paragraph 6.26.2. Mr. Hai found the radiographs to be acceptable and the QA inspector concurred with the following exceptions. The QA inspector observed that the number 45 IQIs appeared to be placed on the film side of the test plate during radiography. AWS D1.5-2002 paragraph 6.10.7.1 states "Hole-type IQIs shall be placed on the source side with hole-type IQI parallel to the weld joint and holes at the outer edge of the area being radiographed." The hole type IQIs on film of view 1 did not have the 2T hole visible. AWS D1.5-2002 paragraph 6.10.7.2 states "The thickness of hole-type IQIs or wire IQI set and the essential hole or wire shall be as described in Tables 6.1 and 6.1A. A smaller essential hole or wire or a thinner hole-type IQI, or a wire IQI using smaller wires may be selected by the Contractor, provided all other provisions for RT are met." The IQIs in film of view 1 were found to have unacceptable film density in the area of interest. AWS D1.5-2002, paragraph 6.10.11 states The transmitted film density through the radiographic image of the body of the required penetrameter(s) and the area of interest shall be 2.0 minimum for radiographs made with a gamma ray source. The maximum density shall be 4.0 for either single or composite viewing. The test plate does not appear to be interpretable. The testing did not appear to comply with the contract documents. Caltrans witness lot number B31-006-07 was assigned for tracking purposes.

Summary of Conversations:

No relevant conversations on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659,, who represents the Office of Structural Materials for your project.

Inspected By:	Lanz,Joe	Quality Assurance Inspector
Reviewed By:	Wright,Mark	QA Reviewer
